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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LONSBERRY, HUNTER B	
ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/775,224	NIKOLICH, PAUL E.	
	Examiner	Art Unit	
	Hunter B. Lonsberry	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ~~8/2004~~ 3/15/04 & 08/06/04
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see response, filed 7/26/04, with respect to the rejection(s)of claim(s) 1-31 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent 5,745,836 to Williams in view of U.S. Patent 5,784,597 to Chiu.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,745,836 to Williams in view of U.S. Patent 5,784,597 to Chiu.

Regarding claim 1, Williams discloses in figure 2 a HFC network (column 7, lines 46-48) comprising:

a head end 102;

at least one fiber node 140 in two-way communication with the head end via fibres 106, (Figure 2, column 8, lines 23-25); and

a return transmitter 250 located within the fiber node 140 and coupled to microprocessor 240 which is coupled to data receiver 220, wherein the return transmitter provides a communication channel adapted to transmit at least one informational signal (test data from microprocessor 240, column 10, line 61-column 11, line 14) that is indicative of a condition of the fiber node to the head end and that is adapted to receive at least one control signal from the head end (column 18, lines 7-13).

Williams fails to disclose the use of a cable modem.

Chiu discloses a cable modem which performs tests and transmits results to the headend and receives commands from the headend. (column 13, lines 11-24, column 14, line 49-column 15, line 27) thus providing a high bandwidth interface with minimal response times.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the return transmitter of Williams to utilize a cable modem thus a high bandwidth interface with minimal response times.

Regarding claim 2, the combination of Williams and Chiu discloses a cable modem.

Williams and Chiu do not disclose if the cable modem is a DOCSIS cable modem.

The examiner takes official notice that the use of a DOCSIS enabled cable modem is notoriously well known in the art. DOCSIS is a widely used cable modem specification which provides compatibility with many low cost cable modems.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of Williams and Chiu to utilize a DOCSIS cable modem thus enabling compatibility with many low cost cable modems.

Regarding claim 3, Williams discloses a microprocessor 240 coupled to data receiver 220 and return transmitter 250 in figure 2.

Williams does not disclose the use of a cable modem.

Chiu discloses a cable modem which performs tests and transmits results to the headend and receives commands from the headend (column 13, lines 11-24, column 14, line 49-column 15, line 27) thus providing a high bandwidth interface with minimal response times.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the return transmitter of Williams to utilize a cable modem thus a high bandwidth interface with minimal response times.

Regarding claim 4, Williams discloses a gate 225, which is controllable by the monitor and control circuit 240 (column 10, lines 9-24).

Regarding claims 5-6, the combination of Williams and Chiu teach a cable modem situated in a fibre node, which is coupled to a monitor and control circuit, headend controller 710 (figure 7) receives data from the monitor and control circuit 240

and outputs network management data 723 for controlling the fibre node (column 15, lines 48-59, column 16, lines 37-46).

Williams and Chiu do not disclose the use of a monitor and control system in a headend which utilizes a CMTS to communicate with a cable modem.

The examiner takes official notice that the use of a CMTS to communicate with a cable modem is notoriously well known in the art. Cable modems cannot communicate directly with each other; they must communicate by channeling their signals through the CMTS.

Therefore it would have been obvious to one skilled in the art at the time of invention to modify the combination of Williams and Chiu to utilize a CMTS thus enabling high-speed communications with a cable modem.

Regarding claim 7, Williams discloses A HFC network (column 7, lines 46-56) comprising:

at least one fiber node 140 including at least one controllable device;

a monitor-and-control circuit 240 located within the fiber node that is adapted to

receive at least one informational signal from the controllable device indicative of condition of the controllable device, that is adapted to transmit the informational signal (column 10, line 61-column 11, line 14),

that is adapted to receive at least one control signal, and that is adapted to transmit the control signal to the controllable device to alter the condition of the controllable device (column 10, line 61-column 11, line 14),;

a transmitter 250 and receiver 211 located within the fiber node, providing a communication channel adapted to receive the informational signal from the monitor-and- control circuit 240, that is adapted to transmit the informational signal, that is adapted to receive the control signal, and that is adapted to transmit the control signal to the monitor-and-control circuit 240 (column 15, lines 48-59, column 16, lines 37-46)

a head end 102;

a receiver 750 at the head end that is adapted to receive the informational signal from the cable modem, that is adapted to transmit the informational signal (fibre transmitter 740),

that is adapted receive the control signal, and that is adapted transmit the control signal to the node receiver 220; and

a monitor-and-control subsystem 710 at the head end that is adapted to receive the informational signal transmitted by the receiver 750, that is adapted to evaluate the informational signal, and that is adapted to transmit the control signal (column 15, lines 48-59, column 16, lines 37-46;).

Williams does not disclose the use of a cable modem or a CMTS.

Chiu discloses a cable modem which performs tests and transmits results to the headend and receives commands from the headend (column 13, lines 11-24, column 14, line 49-column 15, line 27) thus providing a high bandwidth interface with minimal response times.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the return transmitter of Williams to utilize a cable modem thus a high bandwidth interface with minimal response times.

Williams and Chiu do not disclose the use of a CMTS in the headend.

The examiner takes official notice that the use of a CMTS to communicate with a cable modem is notoriously well known in the art. Cable modems cannot communicate directly with each other; they must communicate by channeling their signals through the CMTS.

Therefore it would have been obvious to one skilled in the art at the time of invention to modify the combination of Williams and Chiu to utilize a CMTS thus enabling high-speed communications with a cable modem.

Regarding claims 8-11, Williams discloses that microprocessor 240 is coupled to data receiver 220 and transmitter 250 which receiver the control signals and transmit the informational signals, and is coupled to device 225 to which is transmits a control signal and receives an informational signal (test data, opening/closing gate 225, column 10, line 61-column11, line 14).

Chiu teaches a cable modem (column 13, lines 11-24, column 14, line 49-column 15, line 27).

Regarding claim 12, monitor and control circuit 240 controls the output of gate 225, through which the output of the fibre node is controlled (column 11, lines 16-31).

Regarding claim 13, Williams discloses A HFC network (column 7, lines 46-56)

at least one fiber node 140 including at least one controllable device 225;

a monitor-and-control circuit 240 located within the fiber node, the monitor-and-control circuit 240 having at least one first input-output 231 and a second input-output (212/241), wherein the first input-output of the monitor-and-control circuit receives an informational signal from the controllable device that is indicative of a condition of the controllable device (column 10, line 61-column 11, line 14),

a transmitted 250 and receiver 220 which transmit information to and from microprocessor 240 including an informational signal (column 10, line 61-column 11, line 14);

a head end 102 (figure 7);

a fibre receiver 120 which receives information signals from the fibre node and a fibre transmitter 121 which transmits control signals; and

a monitor-and-control subsystem 710at the head end that has an input 786 and output 721, the monitor-and-control subsystem receives the informational signal 786 from the output of receiver 755, wherein the monitor-and-control subsystem 710 evaluates the informational signal (column 15, lines 48-59, column 16, lines 22-49), whereby evaluating the condition of the controllable device, and transmits at least one control signal based on the evaluation through its output to fibre transmitter 121 to the receiver 220 in the fibre node which outputs the signal to microprocessor 240 which in turn controls the operation of gate 225 (column 10, line 61-column 11, line 31).

Williams does not disclose the use of a cable modem or a CMTS.

Chiu discloses a cable modem which performs tests and transmits results to the headend and receives commands from the headend (column 13, lines 11-24, column 14, line 49-column 15, line 27) thus providing a high bandwidth interface with minimal response times.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the return transmitter of Williams to utilize a cable modem thus a high bandwidth interface with minimal response times.

Williams and Chiu do not disclose the use of a CMTS in the headend.

The examiner takes official notice that the use of a CMTS to communicate with a cable modem is notoriously well known in the art. Cable modems cannot communicate directly with each other; they must communicate by channeling their signals through the CMTS.

Therefore it would have been obvious to one skilled in the art at the time of invention to modify the combination of Williams and Chiu to utilize a CMTS thus enabling high-speed communications with a cable modem.

Regarding claim 14, Williams discloses a fiber node (figure 2) comprising:

at least one input line 212 and at least one output line 231;

at least one controllable device 225;

a monitor-and-control circuit 240 that is adapted to receive at least one informational signal from the controllable device indicative of a condition of the

controllable device, that is adapted to transmit the informational signal, that is adapted to receive at least one control signal, and that is adapted to transmit the control signal to the controllable device to alter the condition of the controllable device (column 10, line 61-column 11, line 31); and

a transmitter 250 which transmits an informational signal and a receiver 220 which receives a control signal (column 10, line 61-column 11, line 19).

Williams fails to disclose a cable modem.

Chiu discloses a cable modem which performs tests and transmits results to the headend and receives commands from the headend (column 13, lines 11-24, column 14, line 49-column 15, line 27) thus providing a high bandwidth interface with minimal response times.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the return transmitter of Williams to utilize a cable modem thus a high bandwidth interface with minimal response times.

Regarding claims 15-16, Williams discloses that microprocessor 240 is coupled to data receiver 220 and transmitter 250 which receiver the control signals and transmit the informational signals, and is coupled to device 225 to which is transmits a control signal and receives an informational signal (test data, opening/closing gate 225, column 10, line 61-column11, line 14).

Regarding claim 17, monitor and control circuit 240 controls the output of gate 225, through which the output of the fibre node is controlled (column 11, lines 16-31).

Regarding claim 18, Williams discloses a fibre node 140,

With an input line 212 and output line 241,

A controllable device 225, microprocessor 240 is coupled to data receiver 220 and transmitter 250 which receiver the control signals and transmit the informational signals, and is coupled to device 225 to which is transmits a control signal and receives an informational signal (test data, opening/closing gate 225, column 10, line 61-column11, line 14).

Williams fails to disclose the use of a cable modem.

Chiu discloses a cable modem which performs tests and transmits results to the headend and receives commands from the headend (column 13, lines 11-24, column 14, line 49-column 15, line 27) thus providing a high bandwidth interface with minimal response times.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the return transmitter of Williams to utilize a cable modem thus a high bandwidth interface with minimal response times.

Regarding claims 19-20, Williams discloses a method for monitoring and controlling at least one fiber node of a hybrid fiber-coax network where the fiber node is

communicatively coupled to a head end of the hybrid fiber-coax network, the method comprising:

receiving at least one informational signal that is indicative of a condition of the fiber node at a transmitter located in the fiber node (column10, line 61-column 11, line 7);

transmitting the informational signal from the cable modem to the head end (column 10, line 61-column 11, line 7);

evaluating the informational signal at the head-end (column 15, lines 43-59, column 16, lines 22-49);

transmitting at least one control signal based on the evaluation from the head end to the transmitter 740 (column 15, lines 43-59, column 16, lines 22-49; and

using the control signal to alter the operation of the fiber node (column 15, lines 43-59, column 16, lines 22-49), by instructing monitor and control circuit 240 to control the operation of device 225 (column 10, line 61-column 11, line 7, column 18, lines 8-15);.

Williams fails to disclose the use of a cable modem.

Chiu discloses a cable modem which performs tests and transmits results to the headend and receives commands from the headend (column 13, lines 11-24, column 14, line 49-column 15, line 27) thus providing a high bandwidth interface with minimal response times.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the return transmitter of Williams to utilize a cable modem thus a high bandwidth interface with minimal response times.

Williams and Chiu do not disclose the use of a CMTS in the headend.

The examiner takes official notice that the use of a CMTS to communicate with a cable modem is notoriously well known in the art. Cable modems cannot communicate directly with each other; they must communicate by channeling their signals through the CMTS.

Therefore it would have been obvious to one skilled in the art at the time of invention to modify the combination of Williams and Chiu to utilize a CMTS thus enabling high-speed communications with a cable modem.

Regarding claim 21, Williams discloses method for identifying a problematic line out of at least two lines (120/121) of a fiber node of a hybrid fiber-coax network where the fiber node is communicatively coupled to a head end of the hybrid fiber-coax network (figure 1, 2, and 7), the method comprising:

receiving a signal at the head end that is indicative of a problematic condition in one of the lines of the fiber node (column 16, lines 37-53);

transmitting control signals from the head end to a receiver 220 located in the fiber node (column 16, lines 37-47),

in response to receiving the signal, that sequentially disable and enable the respective lines one at a time (column 10, line 61-column 11, line 7, column 16, lines 37-47),; and

monitoring further signals at the head end to determine the effect of disabling the respective lines on the occurrence of the problematic condition (column 15, lines 55-58, column 16, lines 37-47).

Williams fails to disclose the use of a cable modem.

Chiu discloses a cable modem which performs tests and transmits results to the headend and receives commands from the headend (column 13, lines 11-24, column 14, line 49-column 15, line 27) thus providing a high bandwidth interface with minimal response times.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the return transmitter of Williams to utilize a cable modem thus a high bandwidth interface with minimal response times.

Regarding claim 22, the combination of Williams and Chiu discloses utilizing a cable modem.

The combination of Williams and Chiu fails to disclose the use of a CMTS in the headend.

The examiner takes official notice that the use of a CMTS to communicate with a cable modem is notoriously well known in the art. Cable modems cannot communicate

directly with each other; they must communicate by channeling their signals through the CMTS.

Therefore it would have been obvious to one skilled in the art at the time of invention to modify the combination of Williams and Chiu to utilize a CMTS thus enabling high speed communications with a cable modem.

Regarding claim 23, Williams discloses that headend controller 710 receives information from a remote node and determines whether or not the signal is indicative of a problematic condition (column 15, lines 37-59, column 16, lines 22-67).

Regarding claim 24, see claim 13.

Regarding claim 25, Williams discloses that monitoring is provided by microprocessor 240 which outputs data to the headend monitor and control system regarding line conditions (column 10, line 61-column 11, line 7).

Regarding claim 26-27, Williams discloses that signals may be transmitted from the headend to reduce problematic conditions after they are identified (column 16, lines 54-67, figure 10).

Regarding claim 28, Williams discloses a method for identifying a problematic line out of at least two lines of a fiber node of a HFC network where the fiber node is

communicatively coupled to a head end of the hybrid fiber-coax network (figures 1, 2 and 7, column 7, lines 46-56), the method comprising:

receiving a signal that is indicative of a problematic condition in one of the lines of the fiber node at a monitor-and-control subsystem located at the head end (column 16, lines 54-67);

transmitting control signals from the monitor-and-control subsystem 710 to a transmission system 740;

transmitting the control signals from the receiver to a monitor-and-control circuit 240 in the fiber node;

using the control signals to sequentially disable and enable the respective lines one at a time (column 16, lines 54-67); and

monitoring further signals to determine the effect of disabling the respective lines on the occurrence of the problematic condition using the monitor-and-control subsystem (column 16, lines 54-67).

Williams does not disclose the use of a cable modem or a CMTS.

Chiu discloses a cable modem which performs tests and transmits results to the headend and receives commands from the headend (column 13, lines 11-24, column 14, line 49-column 15, line 27) thus providing a high bandwidth interface with minimal response times.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the return transmitter of Williams to utilize a cable modem thus a high bandwidth interface with minimal response times.

Williams and Chiu do not disclose the use of a CMTS in the headend.

The examiner takes official notice that the use of a CMTS to communicate with a cable modem is notoriously well known in the art. Cable modems cannot communicate directly with each other; they must communicate by channeling their signals through the CMTS.

Therefore it would have been obvious to one skilled in the art at the time of invention to modify the combination of Williams and Chiu to utilize a CMTS thus enabling high speed communications with a cable modem.

Regarding claims 29-31 see claims 26-27.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hunter B. Lonsberry whose telephone number is 703-305-3234. The examiner can normally be reached on Monday-Friday during normal business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on 703-305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HBL

CHRIS GRANT
PRIMARY EXAMINER